

Ultrasonic standing-wave atomizer arrangementAbstract

The invention relates to an ultrasonic standing-wave atomizer arrangement (10, 20) for producing a paint spray mist for painting a workpiece, with a sonotrode (12, 22), with a component (14, 24) arranged lying opposite the sonotrode (12, 22), a standing ultrasonic field being formed in the intermediate space between the at least one sonotrode (12, 22) and the component (14, 24) in the case of operation, and also with at least one nozzle-shaped paint feeding device (18), which is arranged perpendicularly in relation to the center axis of the sonotrode (12, 22) and introduces the paint into the intermediate space for the atomizing process at at least one paint discharge point, the component arranged lying opposite the sonotrode (22) being a coaxially aligned reflector (24), and the end face (26) of the latter, facing the sonotrode (22), having a step-shaped recessed formation (28) and the depth of said recessed formation corresponding to a multiple of half the wavelength  $\lambda$  of the sonic vibrations in air that are produced in the sonotrode (22).

Significant figure: Figure 2